REMARKS/ARGUMENTS

Claims 1-5, 7, 14, 20-25 and 27 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. The text of claims 6, 8-13, 15-19, 26 and 28-33 is unchanged, but their meaning is changed because they depend from amended claims.

The 35 U.S.C. § 112 Rejection

Claims 1-33 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention. The claims have been amended to correct these typographical or grammatical errors.

With this amendment it is respectfully submitted the claims satisfy the statutory requirements.

The 35 U.S.C. § 102 Rejection

Claims 14 and 16-18 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Emens et al.[1] This rejection is respectfully traversed.

Claims 14 is an independent claim with claims 16-18 depending from claim 14.

[1] U.S. Patent 6,606,643

Emens does not teach or suggest a query sender as defined by the specification of the present application. The specification of the present application, page 18, line 18 through page 19, line 5, states:

> The query sender 164 sends queries to each of *n* fastest content serving sites and *m* other content serving sites, timing the queries so that they arrive at each of the *n* fastest content serving sites and *m* other content serving sites at the same time by using said response time for each of the *n* fastest content serving sites and *m* other content serving sites. This is accomplished by querying the *n* fastest content serving sites and *m* other content serving sites in order of their response times, longest response time first, using said response time orderer. The query for a particular *n* fastest content serving sites or *m* other content serving sites is delayed from the query for the *n* fastest content serving sites or *m* other content serving sites with the longest response time for a time equal to one half of the particular content serving site's response time.

Emens, however, does not send queries based on any type of determination of the *n* fastest content serving sites. Emens sends its queries to ALL mirror sites defined in its list of mirror sites (See col. 7, lines 39-42). It then receives back query times and selects the single fastest mirror site to conduct the transaction (See col. 7, lines 43-54). The drawbacks of such an approach are described in the background of the present invention, page 2, lines 16-17 ("The global server load balancer 6 then may query each of the servers 8a, 8b, 8c.") and page 3, lines 11-14 ("This can be a fairly time consuming process, especially when the number of servers hosting the content grows larger. The relative lack of speed of the process may be bearable when there are only 3 servers hosting the content, but when there are 3000, the delays while waiting for servers to respond can be costly.")

Sending queries to all mirror servers is not the same as sending them to the *n* fastest content serving sites and *m* other content serving sites using information gleaned from a previous queries. There is no evidence that Emens bases the determination as to which mirror servers to query on anything other than the list of all mirror servers, which is determined before any queries

are run. In fact, such an interpretation would run directly counter to what is taught by Emens. Emens teaches that the queries may be run multiple times and the latency times averaged, in order to weed out abnormal results (See col. 8, lines 34-37). Such an approach necessarily implies that the queries be sent to ALL mirror sites each time, so that an average for each could be computed based on the same number of samples. An approach that potentially results in queries being sent to a different set of mirror sites each time (as in the present invention) would render the invention in Emens inoperable.

For these reasons, applicant respectfully submits that claim 14 is in condition for allowance. Additionally, as to claims 16-18, the argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

The First 35 U.S.C. § 103 Rejection

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Emens. The office action states that "Emens did not teach wherein said response time determiner includes an n fastest content serving site chooser and an m other content serving site chooser. However, Emens taught wherein said response time determiner includes a mirror server manager for choosing the n fastest content serving site and m other content serving site. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Emens by including an n fastest content serving site chooser and a m other content serving site chooser because doing so would increase the field of use in their systems with different configurations." This rejection is respectfully traversed.

Emens does not teach or suggest an *n* fastest content serving site chooser as defined by the specification of the present application.

The specification of the present application, page 17, line 22 through page 18, line 9, states:

> The response time determiner 158 may then determine a response time for each of *n* fastest content serving sites and *m* other content serving sites, said *n* fastest content serving sites chosen by using said data and choosing the *n* content serving sites with the lowest transit times, said *m* other content serving sites chosen by selecting new content serving sites as well as randomly selecting old content serving sites. This choosing of the fastest content serving sites may be accomplished by using an *n* fastest content serving site chooser 178, which may access the memory 174 to aid in its determination. Additionally, an *m* other content serving site chooser 180 may be provided to choose which new/random sites to have active. Thus, whenever a new content serving site is added to the network it will become one of the *m* other content serving sites until it has been tested once.

Thus, the specification defines an *n* fastest content serving site chooser as a device that chooses the *n* content serving sites with the lowest transit times. The specification further specifies that the query sender then sends queries to each of the *n* fastest content serving sites, timing the queries so that they arrive at each of the *n* fastest content serving sites and *m* other content serving sites at the same time. Thus, the choosing of the n fastest content serving sites as claimed results in data used to determine which set of content serving sites to query next. Emens, however, does no such thing. In Emens, a single content serving site is chosen as the "best" mirror, and the client-host transaction is then conducted via that "best" mirror. Emens never queries mirror sites using information regarding the *n* fastest content serving site.

Additionally, claim 15 is dependent on claim 14. The argument set forth above is equally applicable here. The base claims being allowable, the dependent claim must also be allowable.

The Second 35 U.S.C. § 103 Rejection

Claims 1-5, 7-13, 19-25 and 27-33 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Emens in view of Midorikawa et al.,[2] among which claims 1, 20 and 21 are independent claims. This rejection is respectfully traversed.

Neither Emens nor Midorikawa teaches or suggests "sending queries to each of *n* fastest content serving sites and *m* other content serving sites." Emens does not send queries based on any type of determination of the *n* fastest content serving sites. Emens sends its queries to ALL mirror sites defined in its list of mirror sites (See col. 7, lines 39-42). It then receives back query times and selects the single fastest mirror site to conduct the transaction (See col. 7, lines 43-54). The drawbacks of such an approach are described in the background of the present invention, page 2, lines 16-17 ("The global server load balancer 6 then may query each of the servers 8a, 8b, 8c.") and page 3, lines 11-14 ("This can be a fairly time consuming process, especially when the number of servers hosting the content grows larger. The relative lack of speed of the process may be bearable when there are only 3 servers hosting the content, but when there are 3000, the delays while waiting for servers to respond can be costly.")

Sending queries to all mirror servers is not the same as sending them to the *n* fastest content serving sites and *m* other content serving sites using information gleaned from a previous queries. There is no evidence that Emens bases the determination as to which mirror servers to

[2] U.S. Patent 5,953,708

query on anything other than the list of all mirror servers, which is determined before any queries are run. In fact, such an interpretation would run directly counter to what is taught by Emens. Emens teaches that the queries may be run multiple times and the latency times averaged, in order to weed out abnormal results (See col. 8, lines 34-37). Such an approach necessarily implies that the queries be sent to ALL mirror sites each time, so that an average for each could be computed based on the same number of samples. An approach that potentially results in queries being sent to a different set of mirror sites each time (as in the present invention) would render the invention in Emens inoperable.

Midorikawa performs similarly to Emens. Midorikawa deals with multiple terminal devices, not mirror sites, however it measures the transmission times for the terminal devices (see Col. 4, lines 48-55) and then uses this information to intentionally delay transactions from the terminals so that the transactions all arrive at the same time (see Col. 5, lines 13-27). However, a query is not the same as a transaction. To the extent that the measuring of the transmission times of the terminal devices in Midorikawa can be equated with "querying" the devices, Midorikawa still sends out queries to ALL terminal devices, regardless of which ones are faster. As described above, such non-discriminatory querying can result in significant bandwidth problems.

Furthermore, Midorikawa does not, as the Office Action alleges, teach "timing said queries so that they arrive at each of the n fastest content serving sites and m other content serving sites at the same time by using said response time for each of the n fastest content serving

sites and m other content serving sites." Rather than queries, Midorikawa uses the response time information to time transactions to arrive at the same time.

For these reasons, applicant respectfully submits that claims 1, 20, and 21 are in condition for allowance. Additionally, as to claims 2-5, 7-13, 19, 22-25, and 27-33, the argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

The Third 35 U.S.C. § 103 Rejection

Claim 6 and 26 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Emens and Midorikawa in view of Jindal et al.[3]. This rejection is respectfully traversed.

Claims 6 and 26 are dependent upon claims 1 and 21, respectively. As such, the argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

[3] U.S. Patent 6,324,580

Request for Allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,
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Dated: 1/15/04

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